A STUDY ON GENUS AGIOMMATUS (HYMENOPTERA: PTEROMALIDAE) FROM CHINA, WITH DESCRIPTION OF ONE NEW SPECIES¹²

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ABSTRACT: The two Chinese species of Agiommatus are treated and keyed. A. pantanus n. sp. is described from the south of China. Agiommatus jiahuanae is synonymized with A. erionotus. Both Chinese Agiommatus species were reared from the eggs of Lepidoptera.

Agiommatus has been placed in Pteromalinae (Pteromalidae) since its description by Crawford in 1911. Agiommatus can be easily recognized within the Pteromalinae by the following characters: head with inner eye orbits converging upwards (fig. 1); eye large, eye height 1.2-1.7 times frons width; female with 3 anelli; mesopleuron ventrally with distinct transverse carina separating from mid coxae. Some species of Cleonyminae (Pteromalidae) have converging inner eye orbits, but they can be easily separated from Agiommatus by the following characters: antenna with 1 anellus; thoracic dorsum with dense setiferous punctures, notauli complete, pronotum usually large and subconical, collar not delimited by an edge.

Eight valid species of Agiommatus are now known. They are distributed mainly in the Oriental region (Noyes, 1998). In this paper we describe a new species, A. pantanus Xiao and Huang, from the Oriental part of China and synonymize A. jiahuanae Yang 1992 with A. erionotus Huang 1986, n. syn. The four remaining Oriental Agiommatus species include A. attaci Ferrière, A. geethae Sureshan & Narendran, A. paria (Motschulsky) and A. sumatraensis Crawford. A. viridis (Girault) is known from Australia and A. bekiliensis (Risbec) was recorded from African Region.

Agiommatus Crawford, 1911


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Generic diagnosis: Body metallic green; head distinctly wider than mesoscutum; inner orbits converging upwards; clypeal margin produced and deeply emarginate in the middle; antenna shorter than head width, 13-segmented, formula 11353; occiput not margined; thorax convex, notaui incomplete; propodeum with complete median carina and plica, nucha distinct; fore wing densely hairy outside speculum; gaster on distinct petiole, gaster narrower than head and thorax.

Biology: Agiommatus species are parasites of the eggs of various large Lepidoptera including Acherontia styx (Westwood) (Sphingidae), Opodiphthera astrophiel (Walker) (= Antheraea simplex) and Attacus atlas (L.) (Saturniidae), Erionota thrax (L.) (Hesperiidae), Pantana sp. (Lymnantriidae), Spodoptera litura (F.) (Noctuidae), and Mimathyma chevana (Moore) (Nymphalidae) (Bouček 1988, Bouček et al. 1979, Huang 1986, Thomson 1958, and Yang, 1992).

Distribution: South and north of China, India, Indonesia, Malaysia, Australia, Madagascar.

Key To Female Species of Agiommatus from China

1. Clypeal margin deeply excided in the middle (fig. 1), with two sharp teeth; head width about 1.1-1.17x as long as height; scapula and frenal area smooth or with very shallow reticulation (fig. 2, 3); marginal vein about 2.4 times as long as stigmal vein (fig. 4). Agiommatus pantanus n. sp.
   Clypeal margin shallowly emarginate (fig. 5), without distinct sharp tooth; head width about 1.25-1.3x as long as height; scapula and frenal area densely reticulate (fig. 6); marginal vein about 3 times as long as stigmal vein. Agiommatus erionotus Huang

Agiommatus pantanus Xiao and Huang, NEW SPECIES

Figs. 1-4

Description. Holotype Female: Length 2 mm. Head and mesosoma metallic dark green, gaster brown; antenna dark yellow; leg yellowish except coxa pale brown. Head large, wider than high (1.17x) in front view (fig. 1); eye height 3.2x malar space; clypeal margin slightly produced, deeply emarginate in the middle, distance between two teeth as long as tooth length. In dorsal view, eye length 5x temple, POL 2.5x OOL. Antennal insertion at middle of face; antenna short, nearly 0.57x head width, scape 0.5x eye height, each anellus transverse, first funicular segment slightly longer than broad, other funicular segments square, clava slightly longer than last two funicular segments combined. Thorax (fig. 2) compact and convex; pronotum with indistinct margin, collar length medially about 0.13x mesoscutum length, mid lobe and frontall part of scutellum (in front of frenal line) distinctly reticulate; scapula, axilla and frenal area smooth or with shallow reticulation; scutellum length 1.26x mesoscutum, 1.5x propodeum length; propodeum (fig. 3) with median carina, plica and cross carina. Fore wing (fig. 4) with upper surface of costal cell bare, basal cell bare, basal vein with 5 hairs; marginal vein longer than postmarginal vein and stigmal vein, marginal vein 1.58x postmarginal vein, and 2.4x stigmal. Gaster with petiole 2x as long as wide, and with one little seta on each side; gaster length 2.9x width, slightly shorter than thorax. Male: Length 1.6-1.7 mm. Gaster triangle and a yellow ribbon on the middle; antenna longer than that of female, 0.75x length of head width; gaster length 1.5-1.6x width, distinctly shorter than thorax (0.8x length of thorax).
Variation. Body length of females examined varied from 1.8 to 2.0 mm; the metallic body color varies from dark green to bluish green. The ratio of head width to height for 12 measured females varied from 1.1 to 1.17. The ratio of gaster length to width for 12 measured females varied from 2.8 to 2.93.

Diagnosis. This species resembles *A. erionotus* Huang and can be separated from it by the key above. This species differs from *A. geethae* Sureshan & Narendran by the combination of the following characters: the clypeal margin deeply excided in the middle (in *geethae*, emarginated); head width 1.1-1.17x as long as height (in *geethae*, head width 1.3x height); antennal insertion at middle of face (in *geethae*, antennal insertion below middle of face); scapula and frenal area smooth or with very shallow reticulation (in *geethae*, with finer reticulation). *A. erionotus* Huang differs from *A. geethae* Sureshan & Narendran at least by the following characters: antennal insertion at middle of face; more transverse head in front view.


Distribution. This species is currently known only from Fujian, southern China.

Biological and collection information. All specimens were reared on 17 September 1996 from eggs of *Pantana* sp. (Lepidoptera: Lymantriidae), which were collected on the under surface of leaves of bamboo on 13 September 1996 in Fujian, China.

Etymology. This species is named from the host, *Pantana* sp.

*Agiommatus erionotus* Huang

Figs. 5-6

*Agiommatus erionotus* Huang, 1986:103-105.
*Agiommatus jiahuanae* Yang, 1992: 72-75. NEW SYNONYMY.

Diagnosis. Body length 2-2.2 mm. Clypeal margin shallowly emarginate (fig.5); head width 1.25-1.3x as long as height; first funicular segment 1.5 times as broad as long, F2 to F5 about quadrate respectively; clava about as long as the last three funicular segments combined; thorax with dense reticulation (fig. 6); marginal vein 3 times as long as stigmal vein; basal cell bare, basal vein complete; both sides of petiole without a small spine.

This species differs from *A. pantanus* n. sp. by the characters given in the key. *A. attaci* Ferrièrè is closely related to *A. erionotus* Huang, from which it differs in its F1 two times as long as broad, basal cell setose, body size 3-3.5mm (Specimen examined: Paraleototype ♀, MALAYA: Kuala, 16 April 1925, ex. eggs of *Attacus atlas* L., coll. G. H. Corbett., det. Ferrièrè).
Figs. 1-6. 1-4. Agiomatus pantanas sp. n. ♀: 1. head in front view; 2. thorax in dorsal view; 3. propodeum in dorsal view; 4. fore wing. 5-6. Agiomatus erionotus Huang ♀: 5. head in front view; 6. thorax in dorsal view.

**Distribution.** This species is currently known from southern China: Fujian, Guangdong, Guangxi, Yunnan.

**Biological and collection information.** Reared from eggs of Erionota thrax L. (Hesperiidae) (Huang, 1986), Dasychira axutha Collenette (Lymantriidae), Dendrolimus sp. (Lasiocampidae) (Huang, 1993) and Mimathyma chevana (Moore) (Nymphalidae) (Yang, 1992).

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